

## **REMARKS**

Claims 1-4 and 7-10 are currently pending. Claims 1, 2, 4, and 7-10 have been amended to improve readability and clarify them. Claims 11-21 were previously canceled as being drawn to non-elected inventions. Applicant respectfully requests reconsideration of the application in response to the non-final Office Action.

### ***Claim Objections***

Claim 4 has been objected to because of the informality in sentence structure. Claim 4 has been amended according to the Office's suggestion and recites:

4. The method of claim 1, wherein...selection probabilities of the multiple groups are....

Applicants would like to thank the Office for the suggestion and respectfully request that the objection to claim 4 be withdrawn.

### **Claim Rejections – 35 USC §112**

Claims 4 and 10 have been rejected under 35 U.S.C. §112, second paragraph.

Claim 4 has been amended and recites:

4. The method of claim 1, wherein...members of these multiple groups are...wherein selection probabilities of the multiple groups are modified....

Claim 10 has been rejected due to an insufficient antecedent basis for the limitation "the weighting factors." Claim 9, from which claim 10 depends, has been amended to recite:

9. The method of claim 1, wherein one or more weighting factors are ....

In light of the amended languages, withdrawal of this rejection is respectfully requested.

### **Claim Rejections – 35 USC §103(a)**

Claims 1-4 and 7-10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Decision Analyst, Inc. ([www.decisionanalyst.com](http://www.decisionanalyst.com)) in view of Probability Definitions ([stat.evu.edu/SRS/modules/ProbDef/urn.html](http://stat.evu.edu/SRS/modules/ProbDef/urn.html)).

In rejecting claim 1, the Office has suggested that Decision Analyst, Inc. allegedly discloses choosing survey panel members by product without replacing the members to the pool, but does not expressly disclose selection probabilities that compensate for the removal of members from the panel. Then, the Office has asserted "Probability Definitions discloses that when sampling without replacement, selection probabilities change to compensate for removal of a member of a population." The Office has also asserted "Decision Analyst, Inc. discloses sampling to choose survey respondents and then removing these respondents so the respondents are not selected again for at least six month...Sampling without replacement is old and notoriously well known in statistics, wherein the probabilities of remaining members are updated for the removal of members. Probability Definitions discloses this sampling without replacements. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to remove the survey panel members of Decision Analyst, Inc. by compensating selection probabilities for the removal of the members of the population in order to increase the quality of the survey data...." Applicant respectfully disagrees.

Probability Definitions discloses that when sampling a member without replacement, selection probabilities in the following sampling change due to the removal of the member. Decision Analyst, Inc. discloses choosing survey panel members without replacing the members in the pool. Thus, when combined, the cited references teach that the process of choosing members without replacing the members in one survey changes the selection probabilities of the following surveys, i.e., the remaining members of the panel become skewed even after the first survey. However, none of the cited references teach or suggest how to compensate the removal of the panel members so that the remaining members are non-skewed for the subsequent survey. In contrast, the present invention discloses a method of compensating for the removal of members after each survey so that the remaining members are kept non-skewed, and thus, *the remaining members match the*

*demographics of the general public.* In the method, weights for the remaining members are determined and adjusted after each survey, wherein the selection probabilities of the remaining members are respectively proportional to the adjusted weights.

To further differentiate the present claims from the cited references, claim 1 has been amended and recites:

1. A computer-implemented method comprising:
  - identifying a group within an available survey panel including a plurality of members, the group having predetermined characteristics;
  - determining a weight for each of the members, said weight being derived to match the members to demographics of the general public;
  - selecting a first set of members from the group for a first survey;
  - temporarily removing the selected first set of members from the available survey panel;
  - adjusting weights of remaining members of the available survey panel to compensate for the removal of the first set of members from the available survey panel and thereby to make the remaining members of the available survey panel match the demographics; and
  - selecting, with a processor, additional members from the available survey panel for a second survey, selection probabilities of the additional members being respectively proportional to the adjusted weights to compensate for the removal of the first set of members from the available survey panel.

Support for the added recitation is found throughout the specifications and figures. As the cited references, taken individually or in combination, fail to teach or suggest all of the limitation of the claimed invention, Applicant respectfully submits that a *prima facie* case of obviousness has not been established, and claim 1 is patentable.

Claims 2-4 and 7-10 depend from claim 1, rendering them also patentable for at least the same reasons. Accordingly, Applicant respectfully requests that an indication of allowance be issued.

In rejecting claim 3, the Office has noted that Decision Analyst, Inc does not expressly disclose using a weight factor. Then, the Office has asserted "Decision

Analyst, Inc. discloses sampling a survey panel to choose survey respondents and then removing these respondents so that the respondents are not selected again for at least six months...Sampling without replacement is old and notoriously well known in the statistics, wherein the probability of selection is adjusted to compensate for the removal of the members as shown by Probability Definitions. Therefore, it would have been obvious to one of ordinary skill in the art...to use a weight factor that reflects the sampling without replacement...." Applicant respectfully disagrees.

A review of the cited references reveals that the cited reference are silent on the weights and " a weight factor proportionate to the number of original members in the group over the number of remaining members in the group in the available panel" as recited in claim 3. As such, Applicant respectfully submits that a *prima facie* case of obviousness has not been established, and claim 3 is further patentable.

In rejecting claim 7, the Office has asserted that "Decision Analyst, Inc. teaches wherein an interval selection method is used... wherein the group is selected based on intervals." To clarify the meaning of interval selection method, claim 7 has been amended and recites:

7. The method of Claim 1, wherein the step of selecting a first set of members includes:
  - determining an interval value that is equal to summation of weights over the members of the available survey panel divided by the number of the members of the available survey panel;
  - selecting a random number that is between zero and the interval value;
  - determining a cumulative weight for each of the members of the available survey panel; and
  - if the cumulative weight of a particular one of the members of the available survey panel matches a sum of the random number and an integer multiple of the interval value, choosing the particular member from the available survey panel.

Support for the added recitation is found throughout the specifications and Figure 3, for instance. A review of the cited references reveals that the cited references are silent on the method that Claim 7 is directed to. As such, Applicant respectfully submits that a *prima facie* case of obviousness has not been established, and claim 7 is further patentable.

In rejecting claim 8, the Office has asserted that "Decision Analyst, Inc. teaches wherein a weighted interval selection method is used... wherein the group is selected based on intervals, with members already selected [and] removed from the group, thus making the chance of selection is higher for the available members." To clarify the meaning of weighted interval selection method, claim 8 has been amended and recites:

8. The method of Claim 1, wherein the step of selecting, with a processor, additional members includes:

determining an interval value that is equal to summation of the adjusted weights over the remaining members of the available survey panel divided by the number of the remaining members of the available survey panel;

selecting a random number that is between zero and the interval value;

determining a cumulative weight for each of the remaining members of the available survey panel; and

if the cumulative weight of a particular one of the remaining members of the available survey panel matches a sum of the random number and an integer multiple of the interval value, choosing the particular member from the available survey panel.

Support for the added recitation is found throughout the specifications and Figure 3, for example. A review of the cited references reveals that the cited references are silent on the method that Claim 8 is directed to. As such, Applicant respectfully submits that a *prima facie* case of obviousness has not been established, and claim 8 is further patentable.

In rejecting claim 9, the Office has asserted "Decision Analyst, Inc. teaches wherein a weighting factor is used to compensate for the removal of people who have been previously given a survey within a certain time period...the first group selected is removed from eligibility, thus giving the remaining members a higher chance or weighting factor of being selected the number in the pool is decreased."

Claim 9 has been amended to include a recitation "one or more weighting factors are *multiplied to the weights of the remaining members of the available survey panel* to compensate for the removal of people who have been previously given a survey within a certain time period." The added recitation is supported in the

specification at page 8, line 14 – page 9, line 4, and by Figure 6, for example. A review of the cited references reveals that the cited references are completely silent on the recitation. As such, Applicant respectfully submits that a *prima facie* case of obviousness has not been established, and claim 9 is further patentable.

Claim 10 depends from claim 9, including all of the recitation of claim 10. In addition, claim 10 recites "an original weighting factor...a removal weighting factor...and a selection weighting factor...." A review of the cited references reveals that the cited references are silent on the recitation. As such, Applicant respectfully submits that a *prima facie* case of obviousness has not been established, and claim 10 is further patentable.

### ***Conclusion***


Based on the reasons as set forth above, Applicant respectfully requests allowance of all pending claims including 1-4 and 7-10.

In the event that there are any questions concerning this paper, or the application in general, the Examiner is respectfully urged to telephone Applicant's undersigned representative so that prosecution of the application may be expedited.

Respectfully submitted,

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